

### Closure Report

September 10, 2019

Re: Crow Federal SWD #001

API# 30-015-42469 Case # 2RP-4990

To: Robert Hamlet

Environmental Specialist-New Mexico Oil Conservation Division Energy, Minerals and

Natural Resources Department 811 S. 1st Street Artesia, NM 88210

On 8/17/2018 a release occurred due to a stainless valve on a riser at the well head was broken off by livestock. An initial C-141 was sent to NMOCD and approved by NMOCD on 10/1/2018. The Crow Federal SWD #001 is located east of Loco Hills in unit letter A section 9 township 17S range 31E (GPS Coordinates: 32.85386 -103.86825). A Remediation Plan was submitted to NMOCD and approved by NMOCD on April 25, 2019.

On June 3, 2019 final five point bottom and wall composite samples in accordance with the NMOCD approved plan were collected and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. The laboratory results for all samples were below table one standards for releases greater than 100 feet to groundwater. The excavation was backfilled with clean imported caliche and contoured to the surrounding area.

Apache Corporation has completed the remediation in accordance with the NMOCD approved Remediation plan and respectfully request that 2RP-4990 be closed.

Enclosed: C-141, Maps, Sample Data, Laboratory Results, Photos, and Field Notes

Submitted by;

Environmental Technician

larry.baker@apachecorp.com

Cell# 432-631-6982 Off# 575-393-7106

Bruce Baker

49IWP-190910-C-1410

District | 1625 N French Dr. Hobbs, NM 88240 District | 18 First St., Artesia, NM 88210 District | 11 1000 Rio Brazos Road, Aztec, NM 87410 District | 17 1000 Rio Brazos Road, Aztec, NM 87410 District | 17 1000 Rio Brazos Road, Aztec, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141
Revised August 24 2018
Submit to appropriate OCD District office

Incident ID	NMAP1827468378
District RP	2RP-4990
Facility ID	N/A
Application ID	pMAP1827468112

### **Release Notification**

### **Responsible Party**

Responsible	Party A	pache Corporation	1	OGRID	873
Contact Nam	ie E	Bruce Baker		Contact T	elephone 432-631-6982
Contact ema	il la	rry.baker@apac	hecorp.com	Incident #	(assigned b) OCD) NMAP1827468378
Contact mail	ing address	2350 W. Marla		s, NM 88240	102110010
			Location	of Release S	ource
atitude	32.85386	5	(NAD 83 m de	Longitude comal degrees to 5 decr	
Site Name C	row Fede	ral SWD # 001	· · ·	Site Type	SWD
Date Release				API# (if ap	plicable) 30-015-42469
Unit Letter	Section	Township	Range	Cou	
Α	9	178	31E	Ed	<del></del>
	Materia	lis) Releasad (Salaci all		d Volume of	• • • • • • • • • • • • • • • • • • • •
Crude Oil		Volume Released	that apply and attach	calculations or specific	Volume Recovered (bbls)
Produced	Water	Volume Released	l (bbls) 7 barr	els	Volume Recovered (bbis) 1 barrel
		Is the concentrati	on of dissolved o		Yes No
Condensal		Volume Released	(bbls)		Volume Recovered (bbls)
Natural G		Volume Released	(Mcf)		Volume Recovered (Mcf)
Other (des	cribe)	Volume/Weight (	Released (provide	e units)	Volume/Weight Recovered (provide units)
Cause of Rele	ase A	stainless valve o	on a riser at the	well head was I	proken off by livestock.

# State of New Mexico Oil Conservation Division

Incident ID	NMAP1827468378
District RP	2RP-4990
Facility ID	N/A
Application ID	pMAP1827468112

Was this a major release as defined by	If YES, for what reason(s) does the respor	sible party consider this a major release?
19.15.29.7(A) NMAC?		
☐ Yes ☒ No		
IEVEC in dist	A CONTRACTOR OF THE CONTRACTOR	0.00
II YES, was immediate no	otice given to the OCD? By whom? To wh	om? When and by what means (phone, email, etc)?
	Initial Re	esponse
The responsible	party must undertake the following actions immediately	unless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.	
l <u> </u>	s been secured to protect human health and	the environment.
Released materials ha	we been contained via the use of berms or d	ikes, absorbent pads, or other containment devices.
All free liquids and re	ecoverable materials have been removed and	managed appropriately.
If all the actions described	d above have <u>not</u> been undertaken, explain v	vhy:
has begun, please attach	a narrative of actions to date. If remedial of	emediation immediately after discovery of a release. If remediation efforts have been successfully completed or if the release occurred lease attach all information needed for closure evaluation.
regulations all operators are public health or the environs failed to adequately investig	required to report and/or file certain release notified.  The acceptance of a C-141 report by the O ate and remediate contamination that pose a three.	est of my knowledge and understand that pursuant to OCD rules and ications and perform corrective actions for releases which may endanger CD does not relieve the operator of liability should their operations have it to groundwater, surface water, human health or the environment. In esponsibility for compliance with any other federal, state, or local laws
Printed Name: Bruc	ce Baker	Title: Environmental Tech. SR.
Signature: Buce	Baher	Date: 10/1//8
email: larry baker@a	apachecorp.com	Telephone: 432-631-6982
OCD Only	Muao	
Received by:		Date: 10/01/18

## State of New Mexico Oil Conservation Division

What is the shallowest depth to groundwater beneath the area affected by the release?

Did this release impact groundwater or surface water?

Incident ID	
District RP	
Facility ID	
Application ID	

### Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date

Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	Yes 🗹 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☑ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes 🗹 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes 🗹 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☑ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes 🗹 No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes 🗹 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☑ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☑ No
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes 🗹 No
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vercontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil
Characterization Report Checklist: Each of the following items nust be included in the report.	
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well Field data Data table of soil contaminant concentration data Depth to water determination Determination of water sources and significant watercourses within 4-mile of the lateral extents of the release	is.
✓ Boring or excavation logs	
Photographs including date and GIS information  Topographic/Aerial maps	
Laboratory data including chain of custody	

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

# State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

## **Remediation Plan**

Remediation Plan Checklist: Each of the following items nust	be included in the plan.
Detailed description of proposed remediation technique	
Scaled sitemap with GPS coordinates showing delineation poi	nts
Estimated volume of material to be remediated	
Closure criteria is to Table 1 specifications subject to 19.15.29	.12(C)(4) NMAC
Proposed schedule for remediation (note if remediation plan ti	meline is more than 90 days OCD approval is required)
Deferral Requests Only: Each of the following items must be co	onfirmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around deconstruction.	production equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human heal	th, the environment, or groundwater.
I hereby certify that the information gives show is two and several	ete to the best of my knowledge and understand that pursuant to OCD
rules and regulations all operators are required to report and/or file	certain release notifications and perform corrective actions for releases
which may endanger public health or the environment. The accept	tance of a C-141 report by the OCD does not relieve the operator of
liability should their operations have failed to adequately investigate surface water, human health or the environment. In addition, OCI	te and remediate contamination that pose a threat to groundwater,
responsibility for compliance with any other federal, state, or local	laws and/or regulations.
	Title: <u>Environmental</u> Technician se
Signature: Bruce Baher	Date: //- //6 - //8
Printed Name: Bruce Baker  Signature: Bruce Baker  email: larry, baker @ apackecorp.com	Telephone: 432-631-6982
OCD Only	
Received by: Robert Hamlet	Date: 4/25/2019
Approved With Attached Conditions o	f Approval Denied Deferral Approved
1/44-	
Signature:	4/25/2010
	Date: 4/25/2019

# State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following	items must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.	11 NMAC
Photographs of the remediated site prior to backfill or photo must be notified 2 days prior to liner inspection)	s of the liner integrity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate OD	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
2	
and regulations all operators are required to report and/or file certa may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and rehuman health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regularestore, reclaim, and re-vegetate the impacted surface area to the caccordance with 19.15.29.13 NMAC including notification to the	ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in OCD when reclamation and re-vegetation are complete.
Printed Name: Drice BANET	Title:
Signature: Bruce Baker	Date: 9/10/19
Printed Name: Bruce Baker  Signature: Bruce Baker  email: larry, baker@apachecorp.com	Telephone: 432 - 631 - 6982
OCD Only	
Received by:	Date:
	y of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible for regulations.
Closure Approved by:	Date:
Printed Name:	Title:

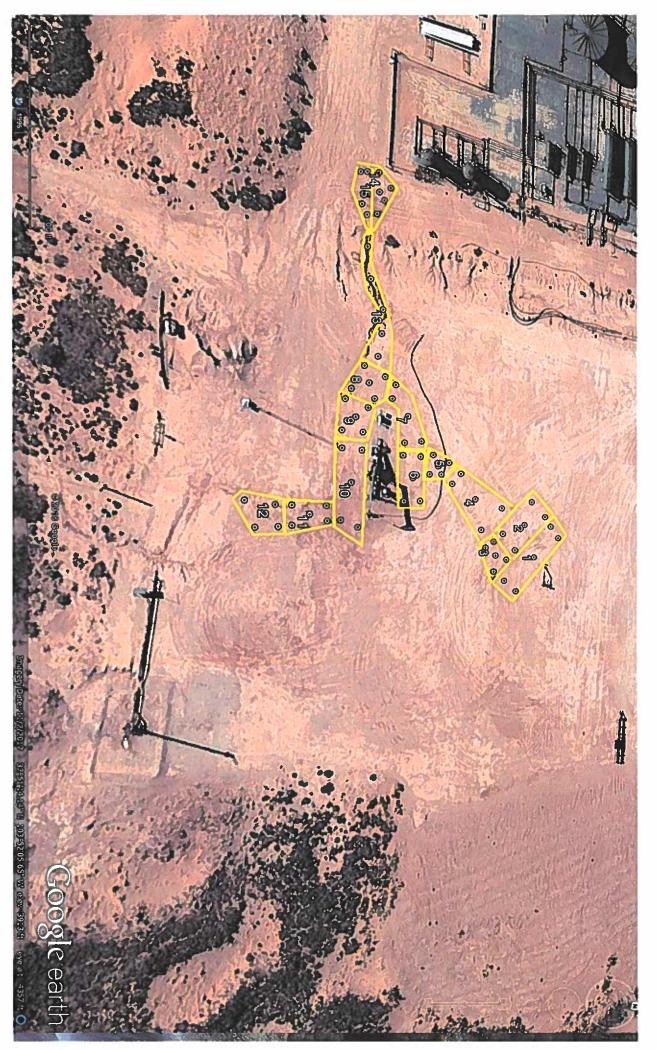
Wall Samples

Sample Pt.	Depth	Chloride	Benzene	Toluene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	Sd9
WC 1	1'	4560	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8538156 -103.8684553
WC2	1'	368	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8535201-0525858.58
WC 2	1'	2240	<0.050	<0.050	0.050	<0.150	<0.300	<10	<10	<10	32.8534664 -103.8684475
WC 4	1'	1840	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8532957 -103.8682216
WC5	1'	3160	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8536169 -103.8683688
WC 6	6"	816	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8540038 -103.8683175
WC7	n/a	2640	<0.050	<0.050	0.050	<0.150	<0.300	<10	<10	<10	32.8536939-103.8683138

**Bottom Samples** 

					Constitution of the contract o						
Sample Pt.	Depth	Chloride	Benzene	Toluene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS
BFC 1	6"-1"	2400	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.85381 -103.86821
BFC 2	6"-1"	4880	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.85377 -103.86831
BFC 3	6"-1"	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.85375 -103.86824
BFC 4	6"-1'	2240	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.85371 -103.86834
BFC 5	6"-1'	1090	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.85362 -103.86841
BFC 6	6"-1'	2880	<0.050	<0.050	<0.050	<0.150	<0.300	<10	219	52.4	32.85355 -103.86847
BFC 7	6"-1'	7440	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.83537 -103.86847
BFC 8	6"-1'	240	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.85348 -103.86857
BFC 9	6"-1'	7120	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8535075 -103.8684745
BFC 10	6"-1'	5120	<0.050	<0.050	<0.050	<0.150	<0.300	<10	156	29.9	32.8534880 -103.8683111
BFC 11	6"-1'	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10	125	39.2	32.8533509 -103.8682823
BFC 12	6"-1'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10	12.1	<10.0	32.8533537 -103.8682755
BFC 13	6"-1'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8535044 -103.8687164
BFC 14	6"-1'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8534940 -103.8689049
BFC 15	6"-1'	2000	<0.050	<0.050	<0.050	<0.150	<0.300	<10	<10	<10	32.8535275 -103.8688720

WAll Samples





**APACHE CORP - HOBBS BRUCE BAKER** 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name:

CROW FED SWD #1

Project Number: Project Location: NONE GIVEN

**NOT GIVEN** 

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

### Sample ID: WC # 1 @ 1' (H901937-01)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	103 9	% 73.3-12	9						
Chloride, SM4500CI-8	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4560	16.0	06/06/2019	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	90.0	% 41-142	?						
Surrogate: 1-Chlorooctadecane	90.0 9	% 37.6-14	7						

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\*=Accredited Analyte

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Colog 2. trans



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1

Project Location:

NONE GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: WC # 2 @ 1' (H901937-02)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	< 0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	103	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	B\$	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	06/06/2019	ND	432	108	400	7.69	QM-07
TPH 8015M	mg,	/kg	Analyze	d By: MS				_	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	92.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	99.7	% 37.6-14	7						

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\*=Accredited Analyte

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Colog ? trans



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To: (575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1
NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

### Sample ID: WC # 3 @ 1' (H901937-03)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	102	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate 1-Chloroociane	90.8	% 41-142	ļ						
Surrogate: 1-Chlorooctadecane	96.5	% 37.6-14	7						

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\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's lability and clerit's evidusive remedy for any claim ansing, whether based in contract or tort, shall be lemted to the amount paid by chent for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be labile for inoderical or consequential damages, including, without limitation, business interruptions, loss of use, or loss of use

Colog i trains



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To: (575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1

Project Location:

NONE GIVEN NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

### Sample ID: WC # 4 @ 1' (H901937-04)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate 4-Bromofluorobenzene (PIE	102 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1840	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	87.3	% 41-142	!						
Surrogate 1-Chlorooctadecane	85.8	% 37.6-14	7						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

06/03/2019

Sampling Date:

06/03/2019

Reported:

06/10/2019

Sampling Type:

Soil

Project Name:

CROW FED SWD #1

Sampling Condition:

Cool & Intact

Project Number: Project Location:

NONE GIVEN

Sample Received By:

Tamara Oldaker

### Sample ID: WC # 5 @ 1' (H901937-05)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	101	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	3160	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chloroociane	90.3	% 41-142							
Surrogate: 1-Chlorooctadecane	85.7	% 37.6-14	7						

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Received:

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Reported:

06/10/2019

Project Name:

CROW FED SWD #1

Project Number: Project Location:

NONE GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: WC # 6 @ 6" (H901937-06)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2,00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	1015	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	816	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10,0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	84.2	% 41-142	?						
Surrogate: 1-Chlorooctadecane	80.6	% 37.6-14	7						

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Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1
NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: WC # 7 ISLAND (H901937-07)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	101 5	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2640	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surragate: 1-Chlorooctane	88.5	% 41-142	?						
Surrogate: I-Chlorooctadecane	85.4	% 37.6-14	7						

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Received:

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Sampling Date:

06/03/2019

Reported:

06/10/2019

Sampling Type:

Soil

Project Name:

CROW FED SWD #1

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

NOT GIVEN

Sample ID: BFC # 1 (H901937-08)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate 4-Bromofluorobenzene (PIL	99.7	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2400	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	66.6	% 41-142	?						
Surrogate: 1-Chlorooctadecane	63.3	% 37.6-14	7						

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Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1

Project Location:

NONE GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

### Sample ID: BFC # 2 (H901937-09)

8TEX 8021B	mg,	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0,150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total 8TEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	101	% 73,3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4880	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	99.7	% 41-142	?						
Surrogate: 1-Chlorooctadecane	97.0	% 37.6-14	7						

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06/10/2019

CROW FED SWD #1

Project Name: Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

### Sample ID: BFC # 3 (H901937-10)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	99.7	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	220	110	200	5.65	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	199	99.6	200	7.49	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	95.1	% 41-142	?						
Surrogate: 1-Chlorooctadecane	93.1	% 37.6-14	17						

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Received:

06/03/2019

Sampling Date:

06/03/2019

Reported:

06/10/2019

Sampling Type:

Soil

Project Name:

CROW FED SWD #1

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Tamara Oldaker

Project Location:

**NOT GIVEN** 

### Sample ID: BFC # 4 (H901937-11)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene*	<0.050	0.050	06/06/2019	ND .	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	1015	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC	::::				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	90.8	% 41-142							
Surrogate: 1-Chlorooctadecane	95.6	% 37.6-14	7						

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Received:

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Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1

Project Location:

NONE GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

### Sample ID: BFC # 5 (H901937-12)

BTEX 8021B	mg,	/kg	Analyze	d By: ms				_	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1090	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	95.3	% 41-142	•						
Surrogate: 1-Chlorooctadecane	99.0	% 37.6-14	7						

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Fax To:

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Received:

06/03/2019

Reported:

06/10/2019

Project Name:

CROW FED SWD #1

Project Number: Project Location: NONE GIVEN

**NOT GIVEN** 

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: BFC # 6 (H901937-13)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	< 0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101 9	% 73.3-12	19						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2880	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	219	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	52.4	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	103 5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	118 9	% 37.6-14	17						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

06/03/2019

Reported:

DTEV SASAR

06/10/2019

Project Name: Project Number: CROW FED SWD #1

Project Location:

NONE GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: BFC # 7 (H901937-14)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	8\$	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	101 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7440	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	< 10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	< 10.0	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	93.1	% 41-142	?						
Surrogate: 1-Chlorooctadecane	96.5	% 37.6-14	7						

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**APACHE CORP - HOBBS BRUCE BAKER** 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name:

CROW FED SWD #1

Project Number: Project Location: NONE GIVEN

NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

### Sample ID: BFC # 8 (H901937-15)

8TEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	103	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	101	% 41-142							
Surrogate: 1-Chlorooctadecane	103	% 37.6-14	7						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1 NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: BFC # 9 (H901937-16)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	101	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	7120	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	< 10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	101	% 41-142	?						
Surrogate: 1-Chlorooctadecane	103	% 37.6-14	7						

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Fax To:

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Received:

06/03/2019

Sampling Date:

06/03/2019

Reported:

06/10/2019

Sampling Type:

Soil

Project Name:

CROW FED SWD #1

Sampling Condition:

Cool & Intact

Project Number: Project Location:

NONE GIVEN

Sample Received By:

Tamara Oldaker

### Sample ID: BFC # 10 (H901937-17)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	101	% 73,3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5120	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	156	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	29.9	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	96.5	% 41-142	?						
Surrogate: 1-Chlorooctadecane	111 :	% 37.6-14	7						

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Received:

06/03/2019

06/10/2019

Reported: Project Name:

CROW FED SWD #1

Project Number:

NONE GIVEN

Project Location:

**NOT GIVEN** 

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: BFC # 11 (H901937-18)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	125	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	39.2	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	94.8	% 41-142							
Surrogate: 1-Chlorooctadecane	108 9	% 37.6-14	7						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name:

CROW FED SWD #1

Project Number: Project Location:

NONE GIVEN NOT GIVEN Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

### Sample ID: BFC # 12 (H901937-19)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.28	114	2.00	3.69	
Toluene*	<0.050	0.050	06/06/2019	ND	2.29	114	2.00	4.21	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	2.13	106	2.00	2.62	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	6.39	106	6.00	2.04	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIL	101	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	12.1	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	94.6	% 41-142	?						
Surrogate 1-Chlorooctadecane	97.4	% 37.6-14	17						

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Fax To:

(575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1
NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: BFC # 13 (H901937-20)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/07/2019	ND	1.89	94.5	2.00	4.34	
Toluene*	<0.050	0.050	06/07/2019	ND	1.89	94.5	2.00	4.16	
Ethylbenzene*	<0.050	0.050	06/07/2019	ND	1.78	88.8	2.00	5.01	
Total Xylenes*	<0.150	0.150	06/07/2019	ND	5.40	90.0	6.00	5.66	
Total BTEX	<0.300	0.300	06/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	103	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	109	% 41-142	?						
Surrogate: I-Chlorooctadecane	114	% 37.6-14	17						

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**APACHE CORP - HOBBS BRUCE BAKER** 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To: (575) 393-2432

Received:

06/03/2019

Reported:

06/10/2019

Project Name: Project Number: CROW FED SWD #1

Project Location:

NONE GIVEN NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: BFC # 14 (H901937-21)

BTEX 8021B	mg/	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	85	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/07/2019	ND	1.89	94.5	2.00	4.34	
Toluene*	<0.050	0.050	06/07/2019	ND	1.89	94.5	2.00	4.16	
Ethylbenzene*	<0.050	0.050	06/07/2019	ND	1.78	88.8	2.00	5.01	
Total Xylenes*	<0.150	0.150	06/07/2019	ND	5.40	90.0	6.00	5.66	
Total BTEX	<0.300	0.300	06/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	102	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC			_		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/06/2019	ND	432	108	400	7.69	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	103	% 41-142	?						
Surrogate: I-Chlorooctadecane	110 5	% 37.6-14	7						

### Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Ournages. Cardinal's habbity and client's exclusive remedy for any claim ansing, whether based in contract or tort, shall be invited to the amount daid by client for analyses. All claims, including those for negligence and any other cause whatsoners shall be deemed warved unless made in withing and incomed by claim thing (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequenced amages, including, without amazenous, boss of use, or loss of profits inciming the claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples clerified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratones.

Colon is trains



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received: Reported: 06/03/2019

06/10/2019

CROW FED SWD #1

Project Name: Project Number:

**NONE GIVEN** 

Project Location:

NOT GIVEN

Sampling Date:

06/03/2019

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Tamara Oldaker

### Sample ID: BFC # 15 (H901937-22)

BTEX 8021B	mg/	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/07/2019	ND	1.89	94.5	2.00	4.34	
Toluene*	<0.050	0.050	06/07/2019	ND	1.89	94.5	2.00	4.16	
Ethylbenzene*	<0.050	0.050	06/07/2019	ND	1.78	88.8	2.00	5.01	
Total Xylenes*	<0.150	0.150	06/07/2019	ND	5.40	90.0	6.00	5.66	
Total BTEX	<0.300	0.300	06/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIE	104	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	06/06/2019	ND	384	96.0	400	0.00	QM-07
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/05/2019	ND	196	98.0	200	1.36	
DRO >C10-C28*	<10.0	10.0	06/05/2019	ND	194	97.1	200	2.48	
EXT DRO >C28-C36	<10.0	10.0	06/05/2019	ND					
Surrogate: 1-Chlorooctane	104	% 41-142	?						
Surrogate: 1-Chlorooctadecane	107	% 37.6-14	7						

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Colog I treens -



### **Notes and Definitions**

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS

recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

Chloride by SM4500CI-8 does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Colory " trans



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Company Name: A.C.		BILL TO	ANALYSIS REQUEST
Project Manager: Route Bake		P.O. #:	
Address:		Company:	
city: Holplos state: NM z	State: NM Zip: 88240	Attn:	
Phone #: Fax #:		Address:	
Project #: Project Owner:		City:	
Project Name:		State: Zip:	
Project Location: (now Feel Sw D#)		Phone #:	
Loss Lies		Fax #:	
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	
Sample I.D.	# CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER: DATE	CI EXT TPH BTEX
1 100 4101,		1 6/3/19 2:17,00	
1		1 (/ 2/202	
	-	7	
	<u>-</u>	1 2:25	
	<u> </u>	1 222	
<i>''</i>	611	2:25	
S.	<u>େ</u>	1 ) d.3320	- / -
	5	1 2:3474	
9 38642	6	1 ) 2.136 64	
10 18 17 #3		1 2:38 Pm	
PLEASE NOTE: Liability and Damages. Cardina's liability and dent's exclusive remov) for any claim artising whether based in contract or you that be intered to the amount pade by the dent for the contract or you that be intered to the amount pade by the dent for the track of the contract or you that be intered to the amount pade of the track of the track of the track of the contract or you that be intered to the amount pade of the track of the	them arising whether based in contract (	them entring whether based in contract or toxt, shall be limited to the amount paid by the client for the	

Relinquished By:

Time:

Date:

Received By:

Munara.

67-8-72

ntal damages, including without limitation, business interruptions, loss of use, or loss of profits included by client, its subsidiaries.

Phone Result:
Fax Result:
REMARKS:

☐ Yes ☐ No Add'l Phone #:

E-mail Results

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

0.7° #97

Sample Condition
Cool Intact
Pes Pres
No No

CHECKED BY: (Initials)



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Company Name: LO		BILL TO	ANALYSIS REQUEST
Project Manager: Much De Kon	P.O.	*	
	Com	Company:	
city: $L/obb$ state: $NW$	State: NW. Zip: 88840 Attn:		
Phone #: Fax #:		Address:	
Project #: Project Owner:	City:		
Project Name:	State:	e: Zip:	
Project Location: (1692) Fool SUD #	Pho	Phone #:	
Sampler Name: The Line Colo	Fax #:	*	
NO BEN BANKY	MATRIX F	PRESERV. SAMPLING	
Sample I.D.	JDGE HER	O/BASE: / COOL HER :	CC EXT TP, BTex
	GRO WAS SOIL OIL SLU	DATE TIME	. (
13 FC #9	6	p-3-19 2:40K	
12 356 45	-	1 2:42	
13 3 FC # 4	9	2 149	
14 3 16 17	6 1	1 / 2:46	
15 0000	- 6	7:48	
16 BEC#9	0	1 ) 2/50	
17 BFCHIO	-	1 2:52	
18 BR#11	6 1 1	1 ( 2:54	
19 3 10 #12	6 1 1	1 2,5%	
20 BFC #13	6 ( 1) 1	1 2:58	
PLEASE NOTE: Liability and Clampges. Cardinglis liability and plent's exclusive remedy for any claim arising whether based in contract or tord, shall be limited to the officiant paid by the client for the measurements. All claims including those for prediction those for prediction those for predictions and any other completion of the expelicable	r claim arising whether based in contract or lort, emed waved unless made in writing and racervi	shall be limited to the allegunt paid by the client for ed by Cardinal within 30 days after completion of the	ar the applicable

Relinquished By:

Date: 3-19

Phone Result: C
Fax Result: C
REMARKS:

☐ Yes ☐ No Add'l Phone #:

F-mail Possits

Time:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition
Cool Intact

Yes TYes
No No

CHECKED BY: (Initials)



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

# 101 East Mariand, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

Company Name: By Dog Co		BILL TO	ANALYSIS REQUEST
Project Manager: Blace Roke		P.O. #:	
Address:		Company:	
City: Kobbs State:n/1/	State: M Zip: 88240	Attn:	
Phone #: Fax #:		Address:	
Project #: Project Owner:		City:	
Project Name:		State: Zip:	
Project Location: (No Fact Swit #1		Phone #:	
Sampler Name:		Fax #:	
	MATRIX	PRESERV. SAMPLING	رر. 
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER: DATE	CL EXT TP, B Tex
· 21 BEC#14		1 63-19 3:00/2	7.
	6 -	3:02%	
	- \		
	~	J	
	<u> </u>		
	/ 1	1) /	
	7		
PLEASE NOTE: Liability and Damages. Cardinal's liability and cleart's exclusive remedy for any cleim ansurg whether based in contract or thirt, shall be limited to the amount paid by the clein's for the enables. All cleims including those for negligence and any other cause whatboever shall be deemed waved unless made in writing and received by Cardinal within 30 days after completion of the applicable	ny cisim arsing whether based in contract semed waved unless made in writing and	or tort, shall be limited to the amount paid by the clier received by Cardinol within 30 days after completion	xincthe

Relinquished By:

Specific Spe

Date:

Received By:

Time:

Date: 5-/9

Phone Result: Fax Result: REMARKS:

☐ Yes ☐ No Add'i Phone#

FNo! Results

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition
Cool Intact
Zives Erves
No II No

CHECKED BY: (Initials)

Relinquished By:

### Crow Federal SWD # 001 (GPS 32.85386 -103.86825) Photos



Photo of excavation facing southwest 11/15/2018



Photo of excavation facing south 11/15/2018



Photo of excavation facing east 11/15/2018

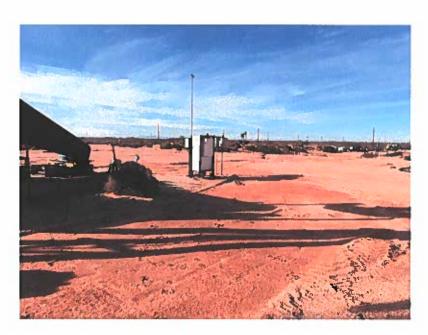


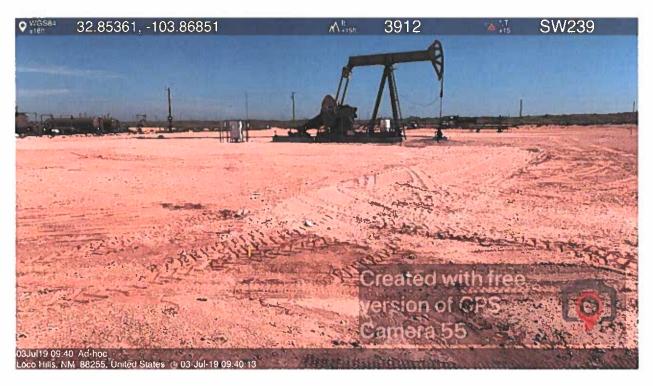
Photo of excavation facing south west 11/15/2018



Photo of the excavation facing south 11/15/2018

### Crow Federal Photo Page







```
# Some 3 2019 Crow Fed SWD #1 well soup / lamps 17
wc#1@1' 32.8538154 103 948 4553
11.2/30 2 1.30 269=3495 8
WC #2 01' 32.853 5280 · 103 · 868 5734
11.3/30.2 0.23 2.67 7 613 x
WC +3 @ 1' 32. 893 4464 -103. 868 4475
11.0/30.1 0.55 2.73 = 1501 ×
WC #401' 32:8532957-103.9682216
11.0/30 0 1,70 2.72 = 4622 ×
WC #5@1' 32. 353 6164 -103 8683688
11.1/30.1 grater 2.0 2.71 = X
WC 8606" 32.8540038-103.8683175
11.2/30.1 1.74 2.68 = 46617
WC 84 Island 32.853 6959 -103.8683138
11.0/30.2 0.75 2.74 = 2,054 x
BFC #9 32-8535075-103. 8684745
BEC#10 32.8534880-103 8683111
BFC #11 32.8533504, -103.8682833
BFCH12 82-853 3537 -103.8682755
        32.853 50 44 - 103. 868.7164
BFC#13
        32-853.4940 - 103.468 2049
BFC +14
        32-8535275 -103.8688720
 BPC#15
        32.85348, -103.86857
BFC #8
        32. 83537, -103. 86847
BFC #7
        32. 85385, -103. 86836
BFC #6
```

BFC #5 32. 85362, -103. 86841

Flow

BFC 5 32.85371, -103.86834 BFC 3 32.85375, -103.86834 BFC 2 32.85375, -103.86824 BFC 2 32.85377, -103.86821 BFC 2 32.85381, -103.86821